

PX 146
(Google's Proposed Redactions)

Onboarding Doc

TL:DR of the product

Google Ad Manager is the world's largest ad server and ad exchange. Being an ad server means we host and serve display ads (which means handling reporting too). Being an ad exchange means we're an online auction-driven marketplace where we connect buyers of ads and sellers (publishers).

The specific team I'll be on is "indirect". Our mission is to optimize the total value of each ad opportunity while sustainably balancing the interests of publishers, advertisers, and users.

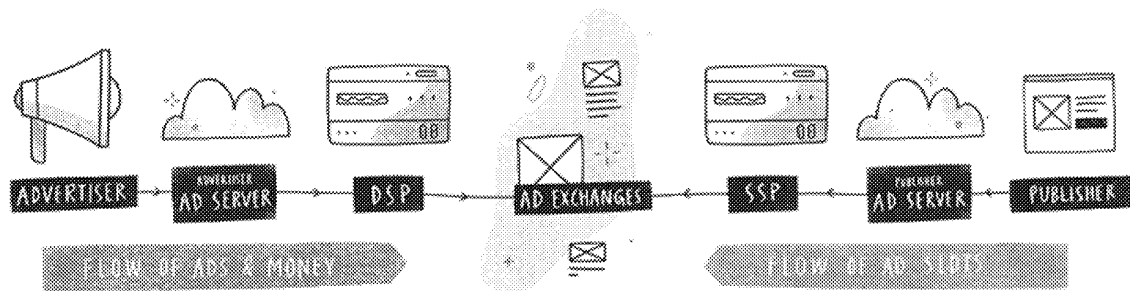
Product History

- Ad Manager used to be two separate products - DoubleClick for Publishers (DFP) and DoubleClick Ad Exchange (AdX, internally known as DRX).
- Sources:
 - [Reband overview](#)

Links

- The ads industry
 - [Display advertising technology landscape \(this is GREAT\)](#)
 - [Noogler's Introduction to Display Ads Vocabulary](#)
 - [How publishers monetize with ad manager](#)
- Official materials on role
 - [PM role on Ad Manager Indirect team](#)
- Display at Google
 - [DVAA sell side primar - March 2018](#)
 - [Display ads landscape](#)
- Header bidding and RTB
 - [Header Bidding vs RTB: What's the Difference?](#)
 - [Really good overview of header bidding](#)
 - [Header bidding background \(good!!\)](#)
- Dynamic allocation
 - [Overview](#)
- Jonce Books
 - [Link to drive folder](#)

Industry Overview



- Advertisers (through media agencies) can buy ad inventory from
 - 1) Publishers directly
 - 2) Ad networks
 - i.e. companies that have exclusive rights to sell inventory from a specified group of publishers
 - 3) Ad exchanges
 - i.e. programmatic marketplace where inventory is auctioned to the highest bidder
- Ad server
 - Tech platform that hosts and serves display ads. It provides reporting and other important campaign analytics.
 - So basically host and serve the ad units (which also means which ad to show when)
 - “Store, select, serve”
 - Advertisers (though media agencies) will run units through an ad server - this helps with reporting (instead of relying on the publisher to)
 - Media agencies and other creative direction companies can send ad tags to an ad server to run (ad tags are just the snippets of code to fetch the ad)
 - Ad servers are like a CMS (host and manage display of content), the ad server also includes an ad decision engine
 - More
- Ad exchange
 - An ad exchange is a technology platform that facilitates that programmatic buying of ad inventory. These exchanges create a marketplace where ads can be bid on, like an auction, and bought in real time
 - More often than not, the method of selling ads across the exchange is through real time bidding (RTB)
 - An ad exchange can gain inventory by accessing multiple SSPs, in turn, an SSP gains inventory by access to multiple publishers
 - An ad exchange can also gain inventory by accessing one or more ad networks.
- Ad network

- A company that has exclusive rights to sell inventory from a specified group of publishers
- Will package inventory from publishers that have the same demographic of consumers and target audience set
- Ad networks will typically buy the inventory, package it, and then resell to an advertiser at a mark up
- Unlike RTB with fluctuating cost, you would buy inventory from an ad network on a fixed CPM basis
- SSP = supply/sell side platform
 - Technology platform that makes it easier for publishers to manage and sell their inventory on multiple ad exchanges and networks
 - Essentially a yield optimization tool
- DSP = demand side platform
 - Online platform that makes it easier for advertisers to buy ads on multiple exchanges and networks.
 - Basically a centralized interface that allows you to interact with many exchanges and networks. Also included centralized bidding and reporting

Questions

- Ad Manager vs. Ad Manager 360
- DV360 vs. Google Ads
- Programmatic - what's the other types besides this? Direct?
- Types of transitions

Definitions

- Header bidding
 - Also known as advance bidding or pre-bidding, is an advanced programmatic technique wherein publishers offer inventory to multiple ad exchanges simultaneously or SSPs before making calls to their ad server. Biggest benefit is greater yield
 - Contrast to waterfall method
 - Direct sales - then offered to ad exchanges in order of some ranking. This is independent of bid
- Private marketplaces
 - Basically, advertisers can have preference by some publishers
- Mediation
 - Ad mediation platforms search for the best available ad networks while sending ad requests to multiple demand sources. This way, they ensure publishers find the best available ads to fill their ad slots.

- Publishers rank ad networks in order of preference. If the top ad network can't fill the ad request, the mediation platform tries the next preferred ad network until it fills the ad request.
- Dynamic allocation
 - Dynamic allocation is a network-wide feature that allows Open Auction bids to compete in real time with guaranteed and remnant line items. Competition occurs on an impression-by-impression basis and does not compromise delivery or revenue of guaranteed line items.
 - Basically let AdX OA compete with other types of demand and win out as long as it had a higher bid.
 - This includes direct guaranteed reservations! The way it works is that the CPM given to a guaranteed is based on the goal - if it's close to meeting then will be lower for example
- Facebook Audience Network (FAN)
 - Facebook launched its Audience Network in 2014, offering advertisers a way to extend their Facebook ad campaigns to a network of third-party apps.
 - Basically a way to buy ads through FB and target them based on FB audience data
 - [Link](#)
- Ad Unit
 - An ad unit is like a blank digital billboard that you can fill with ad creatives through Ad Manager.
 - If inventory is the space where ads are displayed, then ad units are the discrete components of your inventory where ad content can go.
 - Example
 - Let's say you have a news website with a popular sports section. You might create a parent ad unit for sports content. The lower-level, child ad units could be soccer, tennis, and baseball content.
 - When targeting an ad unit, you can select either the sports parent ad unit, which will include all of its child ad units (soccer, tennis, baseball) or any individual child ad unit.
 - If you want to target a general ad to all sports fans regardless of the sport, you would target the parent ad unit, sports.
 - If you want to target only soccer fans, you would target the child ad unit, soccer.
- Order
 - An order is the (direct) campaign that's set up between you and the advertiser.
- Line items
 - Within each order are line items, which carry out the specifics of the order and determine what serves on the site or in the app. These specifics include where

the ads will display and in what inventory, as well as when and for how long they'll run.

- Types
 - Guaranteed (reserved) - obligated to deliver # of impressions
 - Sponsorship (4)
 - The sponsorship line item type has the highest priority and is guaranteed, meaning it must reach the goal that was agreed upon by the publisher and advertiser. This line item type is based on percentage (of matching impressions based on targeting) and time.
 - Standard (6/8/10)
 - The standard line item type is a quantity-based, guaranteed line item. Instead of setting a percentage for this line item, you'd set an actual quantity of impressions as a goal.
 - Standard line items can have different priority types. If you want one to have priority serving over another, designate a higher priority
 - Use standard line items for directly sold campaigns with specific impression goals and defined start and end dates.
 - Non-guaranteed
 - Network (12)
 - A network line item allows you to allocate a specific percentage of your remaining impressions that the line item should fulfill. It can be set to have an unlimited end date.
 - Network line items may only be used for representing non-guaranteed demand. For example, use these to represent third-party ad networks or exchanges.
 - Bulk (12)
 - The bulk line item type is quantity-based and non-guaranteed. It serves a quantity of impressions that remain after sponsorship and/or standard line items have reached their goals, and network line items are not eligible to serve.
 - Bulk line items serve based on a defined impression goal. Because the inventory for bulk line items isn't guaranteed, the impression goal functions more like an impression cap, limiting the number of deliverable impressions.
 - Price priority (12)

- Price priority line items serve primarily based on price, with optional daily or lifetime delivery caps. You set a cost for the impressions, and it will compete with other priority 12 line items.
- AdX (12)
- House (16)
 - House line items serve only if no other paying line item is available. They're the lowest-priority line items
- Network, bulk, price priority, and AdX are **remnant**
- First Look
 - Basically you can set a floor price that if cleared allows “select buyers” (that you choose) to buy the inventory ahead of reservations
 - “First Look has the ability to beat any demand in Ad Manager, ahead of your reservation inventory. A bid eligible for First Look and above the First Look floor competes for an impression.”
 - Only in OA
- Optimized competition
 - tldr - optimized competition basically caps EDA so that high-CPM low fill indirect demand can compete
 - If EDA sets a high temporary CPM than indirect demand can't compete. OC sets a new floor - at least as high as the “regular CPM” of the standard line item but NOT as high as
 - Applies to standard only, not sponsorship
- Authorized buyers
 - Buyers who act as an ad network, trading desk, or demand-side platform can buy inventory. These companies must buy on behalf of multiple advertisers.
 - Uses RTB to buy
 - NOT Advertisers - these are networks, trading desks, and DSPs buying on behalf of advertisers on the exchange
- Open Bidding
 - Our answer to header bidding
 - Used to be known as exchange bidding
 - Open Bidding allows you to invite third-party demand partners to compete for your inventory in a single auction with real-time, server-to-server bidding. Open Bidding in Ad Manager also provides simplified trafficking, reporting, and billing.
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Types of Transactions in Ad Manager

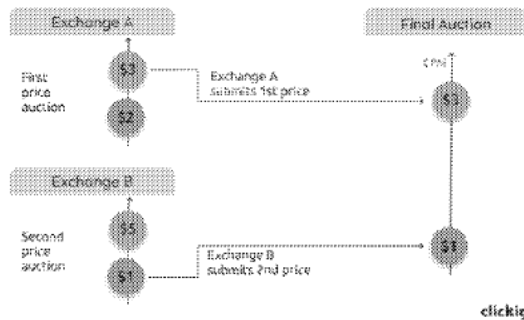
Source

- Open Bidding
 - Basically, a company can enable certain exchanges and SSPs that they have a contractual relationship with to compete with Ad Exchange and Ad Manager in a unified real time auction
 - The key here is it's a unified auction (i.e. all exchanges at same time)
 - Refers to both network and exchange bidding
 - Network = ads rendered by 3p SDK
 - Exchange = ads rendered by google SDK
 - Also known as Project Jedi
- Open auction
 - Open Auction transactions are auction-based transactions for inventory available to **all** buyers.
- Private auction
 - An auction that only some buyers (that are allowlisted by the publisher) can participate in
- Preferred deals
 - Fixed-price, pre-auction transactions that the publisher negotiates with specific buyers.
 - The inventory is NOT guaranteed for the buyer, but is offered to them before it's made available to others.
- Programmatic guaranteed
 - Negotiated number of impressions, fixed-price, pre-auction deal with one buyer.
 - The difference between this and preferred is preferred is just done on price, programmatic guaranteed also includes # of impressions
 - Basically the inventory is reserved (guaranteed) for the buyer

Why 1st price auction

- With 2nd price auction
 - Buyers can bid their "true value" since they'll pay only the 2nd bid if they win, which means they'll be able to extract value (the difference between their bid / true value and the price paid)
 - Floors ensure that buyers don't pay too little
- With 1st price auction
 - Buyers pay whatever they bid
 - So buyers will not bid their true value - they'll shade their bid (i.e. decrease it) in order to capture some profit.
 - Shading complicates things - now a buyer needs to know their true value + work out how much to shade
 - Too high and you may lose the auction






- Too low and you leave money on the table
 - Much more game theory involved
 - Floors ensure not too much shading (same as before essentially)
- BUT then things get complicated when you have multiple auctions, some 1st price and some 2nd
 - This graphic:



- Seems like they're doing this to simplify things - unified 1st price auction to increase transparency
- Links
 - [Google blog announcement](#)
 - [Clickio explanation](#)











My projects

- [REDACTED]
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- Auction integrity
 - ???
- Dynamic revenue share (DRS)
 - Varies our revenue share per query to achieve a target revenue share. This helps us clear more auctions (since they occur net of rev share) and hence increase yield and publisher payout.
 - [REDACTED]
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- ☐ Links
- ☒ Deck

Links to docs

- ☒ First price unified auction
 - ☐ Overview deck (ACM review)
 - ☐ PRD with key decisions

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Line Items

- [REDACTED]

My Evidence of optimized pricing

- [Link](#)

RTB Notes

- [Source](#)

Infra / serving stack

- Links
 - [Quality deck](#)
 - [Serving architecture doc](#)
 - [AdX overview recording](#)
 - [Apps serving recording](#)
- From discussion with Rita
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- The product details section here is super useful!!

Mediation

- To be clear, mediation does not exclusively refer to waterfalls, rather it refers to there being some platform that is in the middle and mediates interactions with other exchanges / networks. Although yes, traditionally today that is done in a waterfall
 - Waterfall = calling ad-networks / exchanges in a waterfall (usually in order of decreasing CPMs) in order to yield.
 - Decreasing floors based on historical performance
 - But open-bidding is technically also mediatio
- Very prominent on app
- The way it works with on-platform
 - Google runs an auction on AdX then dynamically inserts it into the waterfall (based on CPM), this is guaranteed!
 - So Google is always at the bottom of the waterfall since anything below it doesn't matter.
- Links
 - Deck on mediation training (recording)